Berriel-Valdos, L.R., see R. Rodríguez-Vera 73 (1989) 179
Bloch, D., see A. Klein 73 (1989) 111
Blow, K.J., see E.M. Wright 73 (1989) 385
Boone, A.W. and S. Swain, Effective hamiltonians in two-photon laser theory 73 (1989) 47
Boscaino, R. and R.N. Mantegna, Stochastic double-quantum resonance in the presence of phase-diffusing or phase-jump field 73 (1989) 289
Bourne, O.L., see D.J. Hart 73 (1989) 213
Brauch, U. and J. Muckenschnabel, Temperature dependence of flashlamp-pumped Nd:YAG and Nd:Cr:GSGG lasers 73 (1989) 62
Breyer, H. and W. Staude, The differential speckle velocimetry – a method to measure the velocity of random patterns 73 (1989) 422
Burge, R.E., see R.G. Hoptroff 73 (1989) 188
Buzelis, R., see V. Kubeček 73 (1989) 251

Cambon, P., see M. Killinger 73 (1989) 434
Campos, J., see M.S. Millán 73 (1989) 277
Chang, C.-W. and D.-C. Su, An improved technique of measuring the focal length of a lens 73 (1989) 257
Charra, F., see J.M. Nunzi 73 (1989) 357
Chekhova, M.V., T.V. Laptinskaya and A.N. Penin, Interference of Raman and parametric processes in small angle scattering 73 (1989) 361
Chen, W., see B. Zheng 73 (1989) 208
Chen, Y.-W., M. Yamanaka, N. Miyanaga, H. Azechi, S. Ishikawa, T. Yamanaka, S. Nakai and S. Tamura, Measurement of D-D burn region using proton penumbral coded aperture imaging 73 (1989) 337
Christov, I.P., see M.B. Danailov 73 (1989) 235
Clarkson, W.A. and D.C. Hanna, Single frequency Q-switched operation of a laser diode-pumped, Nd:YAG ring laser 73 (1989) 469
Cnossen, G., see K.E. Drabe 73 (1989) 91
Coe, S.E., T. Afshar-Rad and O. Willi, Direct observations of filamentation and self-focusing in a large underdense plasma 73 (1989) 299
Colautti, C., see S.I. Grosz 73 (1989) 7
Corbalán, R., see E. Roldán 73 (1989) 506
Coullet, P., L. Gil and F. Rocca, Optical vortices 73 (1989) 403
Cousty, J.J., J. Marcou and M. Turpin, Study of grooves in silicon chip as means of optical interconnections in VLSI circuits 73 (1989) 23
Craig-Ryan, S.P., see C.G. Atkins 73 (1989) 217

Da Costa, G. and R. Escalona, Focal properties of liquid films deformed by heating with a gaussian laser beam 73 (1989) 1
Danailov, M.B. and I.P. Christov, A novel method of ultrabroadband laser generation 73 (1989) 235
Dawar, A.L. and J.C. Joshi, Fabrication of optical waveguides in *Y*-lithium niobate from dilute melts proton exchange technique 73 (1989) 199
De Araújo, C.B., see A.S.L. Gomes 73 (1989) 475
Débarre, A., J.-C. Keller, J.-L. Le Gouët, A. Richard and P. Tchénio, An amplitude correlator for broadband laser source characterization 73 (1989) 309
De Bougrenet de la Tocnaye, J.L., see M. Killinger 73 (1989) 434
Degiorgio, V., see R. Piazza 73 (1989) 263

De La Fuente, R., see A. Barthelemy 73 (1989) 409
Dement'ev, A., see V. Kubeček 73 (1989) 251
De Rougemont, F., see R. Frey 73 (1989) 232
De Valcárcel, G.J., see E. Roldán 73 (1989) 506
Dolindo, I., see I. Sildos 73 (1989) 223
Drabe, K.E., G. Cnossen and D.A. Wiersma, Localization of spontaneous emission in front of a mirror 73 (1989) 91
Ducloy, M., see A. Klein 73 (1989) 111

Endo, T., R. Yano and T. Muramoto, Homogeneous line broadening of the ruby R_1 line due to the superhyperfine interactions 73 (1989) 227
Ernst, K., M. Grabińska and M. Inguscio, Observation of narrow resonances with a pulsed broadband laser by means of the nonlinear Hanle effect 73 (1989) 43
Escalona, R., see G. Da Costa 73 (1989) 1

Fellman, T., see P. Jungner 73 (1989) 38
Ferreira, C., see M.S. Millán 73 (1989) 277
Fisk, P.T.H., see J.V. Hajnal 73 (1989) 331,512
Florjańczyk, M. and R. Tremblay, Guiding of atoms in a travelling-wave laser trap formed by the axicon 73 (1989) 448
Frey, R., F. de Rougemont and C.H. Lee, An actively mode-locked continuous wave Alexandrite laser 73 (1989) 232
Frieden, B.R., Pseudolinear phase retrieval 73 (1989) 342
Furlan, W.D., see S.I. Grosz 73 (1989) 7

Garavaglia, M., see S.I. Grosz 73 (1989) 7
Gardner, P.J. and T.E. Luke, The spatial and temporal characteristics of the conducting PRIZ spatial light modulator 73 (1989) 19
George, M.C., see B.R. Reddy 73 (1989) 117
Ghosh, P.N., see S. Ghoshal 73 (1989) 455
Ghoshal, S. and P.N. Ghosh, Lineshape of transient infrared–infrared double resonance 73 (1989) 455
Gil, L., see P. Coullet 73 (1989) 403
Ginzburg, V.M., see A.M. Andreyev 73 (1989) 429
Goltz, J. and T. Tschudi, Four-wave mixing with different coupling coefficients for read-out and writing beams; an analytical treatment 73 (1989) 195
Gomes, A.S.L., L.H. Acioli, C.B. de Araújo and J.R. Rios Leite, Dispersion of coherence spikes of incoherent broadband dye lasers 73 (1989) 475
Grabińska, M., see K. Ernst 73 (1989) 43
Grant, R.S., see C.I. Johnston 73 (1989) 370
Gravey, P., see N. Wolffer 73 (1989) 351
Grosz, S.I., W.D. Furlan, C. Colautti and M. Garavaglia, Display of phase-space functions by elliptical zone plates 73 (1989) 7
Guattari, G., C. Palma and C. Padovani, Cross-spectral densities with axial symmetry 73 (1989) 173

Hajnal, J.V., K.G.H. Baldwin, P.T.H. Fisk, H.-A. Bachor and G.I. Opat, Reflection and diffraction of sodium atoms by evanescent laser light fields 73 (1989) 331,512
Hall, T.J., see R.G. Hoptroff 73 (1989) 188

Hamal, K., see V. Kubeček 73 (1989) 251
Hanes, G.R., see A.A. Madej 73 (1989) 147
Hanna, D.C., see W.A. Clarkson 73 (1989) 469
Hart, D.J., O.L. Bourne and D.M. Rayner, Narrow bandwidth coherent VUV spectroscopy of the Kr 123.58 nm line 73 (1989) 213
He, G.S. and P.N. Prasad, Stimulated Rayleigh–Kerr scattering in a CS_2 liquid-core fiber system 73 (1989) 161
Heatley, D.R., see E.M. Wright 73 (1989) 385
Hebling, J. and J. Kuhl, Generation of tunable femtosecond pulses by traveling wave amplification 73 (1989) 375
Hittmair, O., see G. Adam 73 (1989) 121
Hoptroff, R.G., P.W. McOwan, T.J. Hall, W.J. Hossack and R.E. Burge, Two optimisation approaches to COHOE design 73 (1989) 188
Hornung-Lequeux, V., Ph. Lalanne and G. Roosen, Photorefractive wave mixing in $BaTiO_3$ for graded neurons with gain and signal binarization 73 (1989) 12
Hossack, W.J., see R.G. Hoptroff 73 (1989) 188

Inguscio, M., see K. Ernst 73 (1989) 43
Ishikawa, S., see Y.-W. Chen 73 (1989) 337
Izatt, J.R., see W.-S. Zhu 73 (1989) 141

Jagatap, B.N., see S.V. Lawande 73 (1989) 126
Jelonek, M.P. and W.B. Roh, Observation of the mutually-reinforced hole burning effect in multi-mode lasers 73 (1989) 466
Johnston, C.I., D.E. Spence, R.S. Grant and W. Sibbett, Femtosecond pulse generation in the 900–950 nm region from a passively mode-locked LiF:F_2^+ colour centre laser 73 (1989) 370
Joshi, J.C., see A.L. Dawar 73 (1989) 199
Joshi, K.C., see H.C. Kandpal 73 (1989) 169
Jungner, P., T. Fellman, B. Ståhlberg and M. Lindberg, Forward scattering induced by laser fields in atomic $J=1\rightarrow J=0$ systems 73 (1989) 38

Kandpal, H.C., J.S. Vaishya and K.C. Joshi, Wolf shift and its application in spectroradiometry 73 (1989) 169
Karpierz, M.A., The backward mode generation in locally nonlinear optical waveguides 73 (1989) 203
Keller, J.-C., see A. Débarre 73 (1989) 309
Kersebom, T., see P. Strohmeier 73 (1989) 451
Kikas, J., see E. Malkin 73 (1989) 295
Killinger, M., J.L. de Bougrenet de la Tocnaye, P. Cambon and C. Le Moing, Morphological filtering using a Fourier transform hologram 73 (1989) 434
Klein, A., M. Oria, D. Bloch and M. Ducloy, Saturation behavior and dynamic Stark splitting of nearly-degenerate four-wave and multiwave mixing in a forward boxcar configuration 73 (1989) 111
Knight, P.L., see G.M. Palma 73 (1989) 131
Krautschik, C., see B. Batdorf 73 (1989) 393
Krüger, E., see P. Strohmeier 73 (1989) 451
Kubeček, V., K. Hamal, I. Procházka, P. Valach, R. Buzelis and A. Dement'ev, Compression of the Nd:YAP laser pulse by two-stage stimulated backward scattering 73 (1989) 251

Kubota, H., see K. Kurokawa 73 (1989) 319
Kuhl, J., see J. Hebling 73 (1989) 375
Kuipers, L., see H.J. Bakker 73 (1989) 398
Kumar, A., see V.P. Nayyar 73 (1989) 501
Kumar, G.R., B.P. Singh and K.K. Sharma, Optical phase conjugation in Rhodamine-6G doped boric acid glass 73 (1989) 81
Kumbhare, S.R., see B.K. Sinha 73 (1989) 239
Kurobori, T., A. Nebel, R. Beigang and H. Welling, Performance characteristics of an NaCl:OH^- $(F_2^+)_H$ color center laser pumped by a mode-locked Nd:$LiYF_4$ laser 73 (1989) 365
Kurokawa, K., H. Kubota and M. Nakazawa, Generation of 72-fs pulse from a cavity dumped, synchronously pumped dye laser with a single jet 73 (1989) 319
Kurosawa, T., see H. Yan 73 (1989) 136

Lagendijk, A., see H.J. Bakker 73 (1989) 398
Laguarta, F., see E. Roldán 73 (1989) 506
Lalanne, Ph., see V. Hornung-Lequeux 73 (1989) 12
Laptinskaya, T.V., see M.V. Chekhova 73 (1989) 361
Laulan, C., see N. Wolffer 73 (1989) 351
Launay, J.C., see N. Wolffer 73 (1989) 351
Lawande, Q.V., see S.V. Lawande 73 (1989) 126
Lawande, S.V., B.N. Jagatap and Q.V. Lawande, Inhibition of fluorescence in a system of two interacting two level atoms: a quantum jump like behaviour 73 (1989) 126
Lee, C.H., see R. Frey 73 (1989) 232
Le Gouët, J.-L., see A. Débarre 73 (1989) 309
Leitch, J.W., see B. Batdorf 73 (1989) 393
Le Moing, C., see M. Killinger 73 (1989) 434
Lenzi, M., E. Molinari, V. Sessa and M.L. Terranova, Limits of the "exact" decomposition of a gaussian averaged nonlinear function 73 (1989) 67
Lera, G. and M. Nieto-Vesperinas, Influence of beam structure and statistics in second harmonic generation 73 (1989) 244
Leubner, C., see A.K. Puntajer 73 (1989) 153
Lin, M., see B. Zheng 73 (1989) 208
Lin, S. and L. Liu, Opto-electronic implementation of a neural network with a third-order interconnection for quadratic associative memory 73 (1989) 268
Lindberg, M., see P. Jungner 73 (1989) 38
Liu, L., Optical implementation of parallel fuzzy logic 73 (1989) 183
Liu, L., see S. Lin 73 (1989) 268
Loesch, H.J., see G. Sciurba 73 (1989) 489
Lu, N., see J. Bergou 73 (1989) 57
Lu, N., The coherently pumped laser: the simplest system for lasers without inversion 73 (1989) 479
Luke, T.E., see P.J. Gardner 73 (1989) 19

Madej, A.A., W.E. Berger, G.R. Hanes and M.S. O'Sullivan, Tunable, frequency narrowed Nd^{3+}-doped fiber laser for excitation of the $5p\ ^2P_{1/2}$–$4d\ ^2D_{3/2}$ transition in Sr^+ 73 (1989) 147
Mahmood, M.F., Kinetic processes involving Ar^+ and CH_3HgX (X=Cl, Br, I) relevant to blue green mercury halide lasers 73 (1989) 462
Malkin, E. and J. Kikas, Spectral hole burning and pulse filtering in optically dense samples 73 (1989) 295

Mantegna, R.N., see R. Boscaino 73 (1989) 289
Marcou, J., see J.J. Cousty 73 (1989) 23
McOwan, P.W., see R.G. Hoptroff 73 (1989) 188
Meystre, P., E. Schumacher and S. Stenholm, Atomic beam deflection in a quantum field 73 (1989) 443
Millán, M.S., J. Campos, C. Ferreira and M.J. Yzuel, Matched filter and phase only filter performance in colour image recognition 73 (1989) 277
Miyanaga, N., see Y.-W. Chen 73 (1989) 337
Molinari, E., see M. Lenzi 73 (1989) 67
Morales-Romero, A.A., see R. Rodríguez-Vera 73 (1989) 179
Morse, T.F., see B. Batdorf 73 (1989) 393
Muckenschnabel, J., see U. Brauch 73 (1989) 62
Muramoto, T., see T. Endo 73 (1989) 227

Nakai, S., see Y.-W. Chen 73 (1989) 337
Nakazawa, M., see K. Kurokawa 73 (1989) 319
Nayyar, V.P. and A. Kumar, Nonlinear dynamics of an elliptically polarised beam with elliptical irradiance distribution 73 (1989) 501
Nebel, A., see T. Kurobori 73 (1989) 365
Newell, J.C.W., see L. Solymar 73 (1989) 273
Nieto-Vesperinas, M., see G. Lera 73 (1989) 244
Nölle, H., see P. Strohmeier 73 (1989) 451
Nunzi, J.M. and F. Charra, Picosecond studies of optical Stark effect in polydiacetylenes 73 (1989) 357

Oganesyan, S.G. and S.V. Abadjyan, The theory of quantum modulation of an inhomogeneous polarized beam of electrons by laser radiation 73 (1989) 380
Ogino, K., see Y. Aizu 73 (1989) 96
Ohtsubo, J. and T. Aoshima, A new method to separate the Doppler signal from the drift component using a laser diode frequency change 73 (1989) 101
Ojeda-Castañeda, J., see J.C. Barreiro 73 (1989) 106
Okada, K., S. Yoshii, Y. Yamaji, J. Tsujiuchi and T. Ose, Conical holographic stereograms 73 (1989) 347
Onae, A., see H. Yan 73 (1989) 136
Opat, G.I., see J.V. Hajnal 73 (1989) 331,512
Oria, M., see A. Klein 73 (1989) 111
Ose, T., see K. Okada 73 (1989) 347
Österberg, U., see B. Batdorf 73 (1989) 393
O'Sullivan, M.S., see A.A. Madej 73 (1989) 147

Padovani, C., see G. Guattari 73 (1989) 173
Palma, C., see G. Guattari 73 (1989) 173
Palma, G.M. and P.L. Knight, Single atom dynamics in a broad band squeezed vacuum 73 (1989) 131
Pegg, D.T., see S.M. Barnett 73 (1989) 314
Peng, G.-D., see A. Ankiewicz 73 (1989) 75
Penin, A.N., see M.V. Chekhova 73 (1989) 361
Piazza, R., J. Stavans, T. Bellini and V. Degiorgio, Light scattering study of crystalline latex particles 73 (1989) 263
Piskarskas, A., V. Smilgevičius and A. Umbrasas, The parametric generation of bandwidth-limited picosecond light pulses 73 (1989) 322

Planken, P.C.M., see H.J. Bakker 73 (1989) 398
Postan, A., see Y. Ben-Aryeh 73 (1989) 304
Prakash Reddy, G. and M. Singh, A new normal incidence concave holographic grating mounting 73 (1989) 85
Prasad, P.N., see G.S. He 73 (1989) 161
Procházka, I., see V. Kubeček 73 (1989) 251
Pujol, J., see E. Roldán 73 (1989) 506
Puntajer, A.K. and C. Leubner, Asymmetries in intense laser–free-electron scattering 73 (1989) 153

Ramishvili, N.M., see A.M. Andreyev 73 (1989) 429
Rayner, D.M., see D.J. Hart 73 (1989) 213
Reddy, B.R., P. Venkateswarlu and M.C. George, Penning type of ionizing energy transfer collisions in a Hg-Ar discharge detected by the optogalvanic effect 73 (1989) 117
Renge, I., see I. Sildos 73 (1989) 223
Richard, A., see A. Débarre 73 (1989) 309
Rios Leite, J.R., see A.S.L. Gomes 73 (1989) 475
Rocca, F., see P. Coullet 73 (1989) 403
Rodríguez-Vera, R., L.R. Berriel-Valdos and A.A. Morales-Romero, Holographic pseudocolor encoding of filtered images 73 (1989) 179
Roh, W.B., see M.P. Jelonek 73 (1989) 466
Roldán, E., G.J. de Valcárcel, R. Vilaseca, F. Silva, J. Pujol, R. Corbalán and F. Laguarta, Phase dynamics in a Doppler broadened optically-pumped laser 73 (1989) 506
Roosen, G., see V. Hornung-Lequeux 73 (1989) 12
Rotgé, J.R., see B. Batdorf 73 (1989) 393

Sakuma, E., see H. Yan 73 (1989) 136
Schmand, J., see P. Strohmeier 73 (1989) 451
Schumacher, E., see P. Meystre 73 (1989) 443
Sciurba, G. and H.J. Loesch, An efficient Raman shifter for the generation of tunable infrared radiation in the range 3.0–3.5 μm 73 (1989) 489
Scully, M.O., see J. Bergou 73 (1989) 57
Seke, J., see G. Adam 73 (1989) 121
Sessa, V., see M. Lenzi 73 (1989) 67
Sharma, K.K., see G.R. Kumar 73 (1989) 81
She, S., see L. Wu 73 (1989) 32
Sibbett, W., see C.I. Johnston 73 (1989) 370
Sildos, I., M. Aizengendler, I. Dolindo and I. Renge, Burning of thermoresistant spectral holes in a neutron-irradiated sapphire 73 (1989) 223
Silva, F., see E. Roldán 73 (1989) 506
Singh, B.P., see G.R. Kumar 73 (1989) 81
Singh, M., see G. Prakash Reddy 73 (1989) 85
Sinha, B.K., Observation of two-plasmon decay instability saturation domain in laser-plasma experiments 73 (1989) 51
Sinha, B.K. and S.R. Kumbhare, Evidence of polarization-dependent gain in a Nd:glass laser amplifier 73 (1989) 239
Smilgevičius, V., see A. Piskarskas 73 (1989) 322
Solymar, L. and J.C.W. Newell, Silver halide noise gratings recorded in dichromated gelatin 73 (1989) 273

Spence, D.E., see C.I. Johnston 73 (1989) 370
Ståhlberg, B., see P. Jungner 73 (1989) 38
Staude, W., see H. Breyer 73 (1989) 422
Stavans, J., see R. Piazza 73 (1989) 263
Stegeman, G., see B. Batdorf 73 (1989) 393
Stegeman, G.I., see E.M. Wright 73 (1989) 385
Stenholm, S., see S.M. Barnett 73 (1989) 314
Stenholm, S., see P. Meystre 73 (1989) 443
Steuter, B., see P. Strohmeier 73 (1989) 451
Strohmeier, P., T. Kersebom, E. Krüger, H. Nölle, B. Steuter, J. Schmand and J. Andrä, Na-atom beam deceleration by a mode-locked laser 73 (1989) 451
Su, D.-C., see C.-W. Chang 73 (1989) 257
Suttorp, L.G., see A.J. van Wonderen 73 (1989) 165
Swain, S., see A.W. Boone 73 (1989) 47

Tamura, S., see Y.-W. Chen 73 (1989) 337
Tang, Y., Z. Wu and G. Yu, A new intrinsic bistable optical device 73 (1989) 158
Tchénio, P., see A. Débarre 73 (1989) 309
Terranova, M.L., see M. Lenzi 73 (1989) 67
Tomita, Y., R. Yahalom and A. Yariv, Phase shift and cross talk of a self-pumped phase-conjugate mirror 73 (1989) 413
Tremblay, R., see M. Florjańczyk 73 (1989) 448
Tschudi, T., see J. Goltz 73 (1989) 195
Tsujiuchi, J., see K. Okada 73 (1989) 347
Turpin, M., see J.J. Cousty 73 (1989) 23

Umbrasas, A., see A. Piskarskas 73 (1989) 322

Vaishya, J.S., see H.C. Kandpal 73 (1989) 169
Valach, P., see V. Kubeček 73 (1989) 251
Van Wonderen, A.J. and L.G. Suttorp, Phase instabilities in absorptive optical bistability 73 (1989) 165
Venkateswarlu, P., see B.R. Reddy 73 (1989) 117
Vilaseca, R., see E. Roldán 73 (1989) 506

Wan, L., Y. Yuan and G. Assanto, Observation of dynamic photorefractive effect in lithium niobate waveguides 73 (1989) 439
Wang, D., Z. Zhang, Y. Zhu, S. Zhang and P. Ye, Observations on the coupling channel of two mutually incoherent beams without internal reflection in $BaTiO_3$ 73 (1989) 495
Wang, Y.-Q., see D.-H. Yang 73 (1989) 285
Welling, H., see T. Kurobori 73 (1989) 365
Wiersma, D.A., see K.E. Drabe 73 (1989) 91
Willi, O., see S.E. Coe 73 (1989) 299
Wolffer, N., P. Gravey, C. Laulan and J.C. Launay, Analysis of double phase conjugate mirror interaction in absorbing photorefractive crystals: application to BGO:Cu 73 (1989) 351
Wright, E.M., D.R. Heatley, G.I. Stegeman and K.J. Blow, Variation of the switching power with diffusion length in a nonlinear directional coupler 73 (1989) 385
Wu, L. and S. She, A perturbation analysis for modes in graded waveguides by hypervirial and Hellmann–Feynman theorems 73 (1989) 32

Wu, Z., see Y. Tang 73 (1989) 158
Wyatt, R., see C.G. Atkins 73 (1989) 217
Wynne, C.G., Immersed gratings and associated phenomena – 1 73 (1989) 419

Yahalom, R., see Y. Tomita 73 (1989) 413
Yamaji, Y., see K. Okada 73 (1989) 347
Yamanaka, M., see Y.-W. Chen 73 (1989) 337
Yamanaka, T., see Y.-W. Chen 73 (1989) 337
Yan, H., T. Kurosawa, A. Onae and E. Sakuma, Frequency stabilization of a CO_2 laser by using Lamb-dip from a photo-acoustic cell 73 (1989) 136
Yang, D.-H. and Y.-Q. Wang, Detection by cycling transition in an optically pumped cesium beam frequency standard 73 (1989) 285
Yano, R., see T. Endo 73 (1989) 227
Yariv, A., see Y. Tomita 73 (1989) 413
Ye, P., see D. Wang 73 (1989) 495
Yoshii, S., see K. Okada 73 (1989) 347
Yu, G., see Y. Tang 73 (1989) 158
Yuan, Y., see L. Wan 73 (1989) 439
Yzuel, M.J., see M.S. Millán 73 (1989) 277

Zaheer, K. and M.S. Zubairy, Photon statistics in Jaynes-Cummings model without the rotating-wave approximation 73 (1989) 325
Zhang, B., see B. Zheng 73 (1989) 208
Zhang, S., see D. Wang 73 (1989) 495
Zhang, Z., see D. Wang 73 (1989) 495
Zheng, B., M. Lin, B. Zhang and W. Chen, Study of two-photon absorption cross section by multiphoton ionization spectroscopy 73 (1989) 208
Zhu, W.-S. and J.R. Izatt, Optically pumped $^{15}NH_3$ Raman FIR laser 73 (1989) 141
Zhu, Y., see D. Wang 73 (1989) 495
Zubairy, M.S., see K. Zaheer 73 (1989) 325

SUBJECT INDEX TO VOLUME 73

Propagation and transmission in homogeneous media

Focal properties of liquid films deformed by heating with a gaussian laser beam, G. Da Costa and R. Escalona 73 (1989) 1
A new normal incidence concave holographic grating mounting, G. Prakash Reddy and M. Singh 73 (1989) 85
Localization of spontaneous emission in front of a mirror, K.E. Drabe, G. Cnossen and D.A. Wiersma 73 (1989) 91
Wolf shift and its application in spectroradiometry, H.C. Kandpal, J.S. Vaishya and K.C. Joshi 73 (1989) 169
Cross-spectral densities with axial symmetry, G. Guattari, C. Palma and C. Padovani 73 (1989) 173
An improved technique of measuring the focal length of a lens, C.-W. Chang and D.-C. Su 73 (1989) 257
Light scattering study of crystalline latex particles, R. Piazza, J. Stavans, T. Bellini and V. Degiorgio 73 (1989) 263
Reflection and diffraction of sodium atoms by evanescent laser light fields, J.V. Hajnal, K.G.H. Baldwin, P.T.H. Fisk, H.-A. Bachor and G.I. Opat 73 (1989) 331
Study of the length dependence of frequency-doubled light in optical fibers, B. Batdorf, C. Krautschik, U. Österberg, G. Stegeman, J.W. Leitch, J.R. Rotgé and T.F. Morse 73 (1989) 393
Immersed gratings and associated phenomena – 1, C.G. Wynne 73 (1989) 419

Propagation and transmission in inhomogeneous media

Measurement of velocity using the photon correlation of dynamic speckles detected by a multiple aperture, Y. Aizu, H. Ambar, K. Ogino and T. Asakura 73 (1989) 96

Optical information, image formation and analysis, optical computing

Display of phase-space functions by elliptical zone plates, S.I. Grosz, W.D. Furlan, C. Colautti and M. Garavaglia 73 (1989) 7
Photorefractive wave mixing in $BaTiO_3$ for graded neurons with gain and signal binarization, V. Hornung-Lequeux, Ph. Lalanne and G. Roosen 73 (1989) 12
The spatial and temporal characteristics of the conducting PRIZ spatial light modulator, P.J. Gardner and T.E. Luke 73 (1989) 19
Study of grooves in silicon chip as means of optical interconnections in VLSI circuits, J.J. Cousty, J. Marcou and M. Turpin 73 (1989) 23
A new method to separate the Doppler signal from the drift component using a laser diode frequency change, J. Ohtsubo and T. Aoshima 73 (1989) 101
Lau effect with only phase gratings, J.C. Barreiro, P. Andrés and J. Ojeda-Castañeda 73 (1989) 106
Holographic pseudocolor encoding of filtered images, R. Rodríguez-Vera, L.R. Berriel-Valdos and A.A. Morales-Romero 73 (1989) 179
Optical implementation of parallel fuzzy logic, L. Liu 73 (1989) 183

Two optimisation approaches to COHOE design, R.G. Hoptroff, P.W. McOwan, T.J. Hall, W.J. Hossack and R.E. Burge 73 (1989) 188
Four-wave mixing with different coupling coefficients for readout and writing beams; an analytical treatment, J. Goltz and T. Tschudi 73 (1989) 195
Opto-electronic implementation of a neural network with a third-order interconnection for quadratic associative memory, S. Lin and L. Liu 73 (1989) 268
Silver halide noise gratings recorded in dichromated gelatin, L. Solymar and J.C.W. Newell 73 (1989) 273
Matched filter and phase only filter performance in colour image recognition, M.S. Millán, J. Campos, C. Ferreira and M.J. Yzuel 73 (1989) 277
An amplitude correlator for broadband laser source characterization, A. Débarre, J.-C. Keller, J.-L. Le Gouët, A. Richard and P. Tchénio 73 (1989) 309
Measurement of D-D burn region using proton penumbral coded aperture imaging, Y.-W. Chen, M. Yamanaka, N. Miyanaga, H. Azechi, S. Ishikawa, T. Yamanaka, S. Nakai and S. Tamura 73 (1989) 337
Pseudolinear phase retrieval, B.R. Frieden 73 (1989) 342
Conical holographic stereograms, K. Okada, S. Yoshii, Y. Yamaji, J. Tsujiuchi and T. Ose 73 (1989) 347
Analysis of double phase conjugate mirror interaction in absorbing photorefractive crystals: application to BGO:Cu, N. Wolffer, P. Gravey, C. Laulan and J.C. Launay 73 (1989) 351
The differential speckle velocimetry – a method to measure the velocity of random patterns, H. Breyer and W. Staude 73 (1989) 422
The use of the Talbot effect in dynamic measurements of deformed liquid/gas interface surface shape, A.M. Andreyev, V.M. Ginzburg and N.M. Ramishvili 73 (1989) 429
Morphological filtering using a Fourier transform hologram, M. Killinger, J.L. de Bougrenet de la Tocnaye, P. Cambon and C. Le Moing 73 (1989) 434

Optical communications

A perturbation analysis for modes in graded waveguides by hypervirial and Hellmann–Feynman theorems, L. Wu and S. She 73 (1989) 32
Fabrication of optical waveguides in *Y*-lithium niobate from dilute melts proton exchange technique, A.L. Dawar and J.C. Joshi 73 (1989) 199
The backward mode generation in locally nonlinear optical waveguides, M.A. Karpierz 73 (1989) 203
Pump excited state absorption in Er^{3+} doped optical fibres, C.G. Atkins, J.R. Armitage, R. Wyatt, B.J. Ainslie and S.P. Craig-Ryan 73 (1989) 217
Observation of dynamic photorefractive effect in lithium niobate waveguides, L. Wan, Y. Yuan and G. Assanto 73 (1989) 439

Atomic and molecular physics

Forward scattering induced by laser fields in atomic $J=1\rightarrow J=0$ systems, P. Jungner, T. Fellman, B. Ståhlberg and M. Lindberg 73 (1989) 38
Observation of narrow resonances with a pulsed broadband laser by means of the nonlinear Hanle effect, K. Ernst, M. Grabińska and M. Inguscio 73 (1989) 43
Effective hamiltonians in two-photon laser theory, A.W. Boone and S. Swain 73 (1989) 47
Saturation behavior and dynamic Stark splitting of nearly-degenerate four-wave and multiwave mixing in a forward boxcar configuration, A. Klein, M. Oria, D. Bloch and M. Ducloy 73 (1989) 111

Penning type of ionizing energy transfer collisions in a Hg-Ar discharge detected by the optogalvanic effect, B.R. Reddy, P. Venkateswarlu and M.C. George 73 (1989) 117
Cavity-damping effects in the interaction of a three-level atom with a single-mode radiation field, G. Adam, J. Seke and O. Hittmair 73 (1989) 121
Inhibition of fluorescence in a system of two interacting two level atoms: a quantum jump like behaviour, S.V. Lawande, B.N. Jagatap and Q.V. Lawande 73 (1989) 126
Single atom dynamics in a broad band squeezed vacuum, G.M. Palma and P.L. Knight 73 (1989) 131
Study of two-photon absorption cross section by multiphoton ionization spectroscopy, B. Zheng, M. Lin, B. Zhang and W. Chen 73 (1989) 208
Narrow bandwidth coherent VUV spectroscopy of the Kr 123.58 nm line, D.J. Hart, O.L. Bourne and D.M. Rayner 73 (1989) 213
Detection by cycling transition in an optically pumped cesium beam frequency standard, D.-H. Yang and Y.-Q. Wang 73 (1989) 285
Stochastic double-quantum resonance in the presence of phase-diffusing or phase-jump field, R. Boscaino and R.N. Mantegna 73 (1989) 289
Reflection and diffraction of sodium atoms by evanescent laser light fields, J.V. Hajnal, K.G.H. Baldwin, P.T.H. Fisk, H.-A. Bachor and G.I. Opat 73 (1989) 331
Picosecond studies of optical Stark effect in polydiacetylenes, J.M. Nunzi and F. Charra 73 (1989) 357
Atomic beam deflection in a quantum field, P. Meystre, E. Schumacher and S. Stenholm 73 (1989) 443
Guiding of atoms in a travelling-wave laser trap formed by the axicon, M. Florjańczyk and R. Tremblay 73 (1989) 448
Na-atom beam deceleration by a mode-locked laser, P. Strohmeier, T. Kersebom, E. Krüger, H. Nölle, B. Steuter, J. Schmand and J. Andrä 73 (1989) 451
Lineshape of transient infrared–infrared double resonance, S. Ghoshal and P.N. Ghosh 73 (1989) 455

Condensed matter

Localization of spontaneous emission in front of a mirror, K.E. Drabe, G. Cnossen and D.A. Wiersma 73 (1989) 91
Pump excited state absorption in Er^{3+} doped optical fibres, C.G. Atkins, J.R. Armitage, R. Wyatt, B.J. Ainslie and S.P. Craig-Ryan 73 (1989) 217
Burning of thermoresistant spectral holes in a neutron-irradiated sapphire, I. Sildos, M. Aizengendler, I. Dolindo and I. Renge 73 (1989) 223
Homogeneous line broadening of the ruby R_1 line due to the superhyperfine interactions, T. Endo, R. Yano and T. Muramoto 73 (1989) 227
Light scattering study of crystalline latex particles, R. Piazza, J. Stavans, T. Bellini and V. Degiorgio 73 (1989) 263
Spectral hole burning and pulse filtering in optically dense samples, E. Malkin and J. Kikas 73 (1989) 295
Analysis of double phase conjugate mirror interaction in absorbing photorefractive crystals: application to BGO:Cu, N. Wolffer, P. Gravey, C. Laulan and J.C. Launay 73 (1989) 351
Interference of Raman and parametric processes in small angle scattering, M.V. Chekhova, T.V. Laptinskaya and A.N. Penin 73 (1989) 361
Study of the length dependence of frequency-doubled light in optical fibers, B. Batdorf, C. Krautschik, U. Österberg, G. Stegeman, J.W. Leitch, J.R. Rotgé and T.F. Morse 73 (1989) 393

Plasmas

Observation of two-plasmon decay instability saturation domain in laser-plasma experiments, B.K. Sinha 73 (1989) 51
Direct observations of filamentation and self-focusing in a large underdense plasma, S.E. Coe, T. Afshar-Rad and O. Willi 73 (1989) 299
The influence of collisions on the Orbitron maser, Y. Ben-Aryeh and A. Postan 73 (1989) 304
Kinetic processes involving Ar^+ and CH_3HgX (X=Cl, Br, I) relevant to blue green mercury halide lasers, M.F. Mahmood 73 (1989) 462

Lasers

The two-photon correlated-spontaneous-emission laser in a squeezed vacuum, J. Bergou, N. Lu and M.O. Scully 73 (1989) 57
Temperature dependence of flashlamp-pumped Nd:YAG and Nd:Cr:GSGG lasers, U. Brauch and J. Muckenschnabel 73 (1989) 62
Limits of the "exact" decomposition of a gaussian averaged nonlinear function, M. Lenzi, E. Molinari, V. Sessa and M.L. Terranova 73 (1989) 67
Frequency stabilization of a CO_2 laser by using Lamb-dip from a photo-acoustic cell, H. Yan, T. Kurosawa, A. Onae and E. Sakuma 73 (1989) 136
Optically pumped $^{15}NH_3$ Raman FIR laser, W.-S. Zhu and J.R. Izatt 73 (1989) 141
Tunable, frequency narrowed Nd^{3+}-doped fiber laser for excitation of the $5p\ ^2P_{1/2}$–$4d\ ^2D_{3/2}$ transition in Sr^+, A.A. Madej, W.E. Berger, G.R. Hanes and M.S. O'Sullivan 73 (1989) 147
Asymmetries in intense laser–free-electron scattering, A.K. Puntajer and C. Leubner 73 (1989) 153
An actively mode-locked continuous wave Alexandrite laser, R. Frey, F. de Rougemont and C.H. Lee 73 (1989) 232
A novel method of ultrabroadband laser generation, M.B. Danailov and I.P. Christov 73 (1989) 235
Evidence of polarization-dependent gain in a Nd:glass laser amplifier, B.K. Sinha and S.R. Kumbhare 73 (1989) 239
The influence of collisions on the Orbitron maser, Y. Ben-Aryeh and A. Postan 73 (1989) 304
An amplitude correlator for broadband laser source characterization, A. Débarre, J.-C. Keller, J.-L. Le Gouët, A. Richard and P. Tchénio 73 (1989) 309
A new approach to optical phase diffusion, S.M. Barnett, S. Stenholm and D.T. Pegg 73 (1989) 314
Generation of 72-fs pulse from a cavity dumped, synchronously pumped dye laser with a single jet, K. Kurokawa, H. Kubota and M. Nakazawa 73 (1989) 319
Performance characteristics of an $NaCl:OH^-\ (F_2^+)_H$ color center laser pumped by a mode-locked $Nd:LiYF_4$ laser, T. Kurobori, A. Nebel, R. Beigang and H. Welling 73 (1989) 365
Femtosecond pulse generation in the 900–950 nm region from a passively mode-locked $LiF:F_2^+$ colour centre laser, C.I. Johnston, D.E. Spence, R.S. Grant and W. Sibbett 73 (1989) 370
Generation of tunable femtosecond pulses by traveling wave amplification, J. Hebling and J. Kuhl 73 (1989) 375
The theory of quantum modulation of an inhomogeneous polarized beam of electrons by laser radiation, S.G. Oganesyan and S.V. Abadjyan 73 (1989) 380
Kinetic processes involving Ar^+ and CH_3HgX (X=Cl, Br, I) relevant to blue green mercury halide lasers, M.F. Mahmood 73 (1989) 462
Observation of the mutually-reinforced hole burning effect in multi-mode lasers, M.P. Jelonek and W.B. Roh 73 (1989) 466

Single frequency Q-switched operation of a laser diode-pumped, Nd:YAG ring laser, W.A. Clarkson and D.C. Hanna 73 (1989) 469
Dispersion of coherence spikes of incoherent broadband dye lasers, A.S.L. Gomes, L.H. Acioli, C.B. de Araújo and J.R. Rios Leite 73 (1989) 475
The coherently pumped laser: the simplest system for lasers without inversion, N. Lu 73 (1989) 479
Enhancement of the modulation depth of an active modelocker using an external cavity, J.R.M. Barr 73 (1989) 484
An efficient Raman shifter for the generation of tunable infrared radiation in the range 3.0–3.5 μm, G. Sciurba and H.J. Loesch 73 (1989) 489

Nonlinear optics

Nonlinear optical fibre couplers at near-critical powers, A. Ankiewicz and G.-D. Peng 73 (1989) 75
Optical phase conjugation in Rhodamine-6G doped boric acid glass, G.R. Kumar, B.P. Singh and K.K. Sharma 73 (1989) 81
Asymmetries in intense laser–free-electron scattering, A.K. Puntajer and C. Leubner 73 (1989) 153
A new intrinsic bistable optical device, Y. Tang, Z. Wu and G. Yu 73 (1989) 158
Stimulated Rayleigh–Kerr scattering in a CS_2 liquid-core fiber system, G.S. He and P.N. Prasad 73 (1989) 161
Phase instabilities in absorptive optical bistability, A.J. van Wonderen and L.G. Suttorp 73 (1989) 165
Four-wave mixing with different coupling coefficients for readout and writing beams; an analytical treatment, J. Goltz and T. Tschudi 73 (1989) 195
Influence of beam structure and statistics in second harmonic generation, G. Lera and M. Nieto-Vesperinas 73 (1989) 244
Compression of the Nd:YAP laser pulse by two-stage stimulated backward scattering, V. Kubeček, K. Hamal, I. Procházka, P. Valach, R. Buzelis and A. Dement'ev 73 (1989) 251
Stochastic double-quantum resonance in the presence of phase-diffusing or phase-jump field, R. Boscaino and R.N. Mantegna 73 (1989) 289
Spectral hole burning and pulse filtering in optically dense samples, E. Malkin and J. Kikas 73 (1989) 295
The parametric generation of bandwidth-limited picosecond light pulses, A. Piskarskas, V. Smilgevičius and A. Umbrasas 73 (1989) 322
Photon statistics in Jaynes-Cummings model without the rotating-wave approximation, K. Zaheer and M.S. Zubairy 73 (1989) 325
Reflection and diffraction of sodium atoms by evanescent laser light fields, J.V. Hajnal, K.G.H. Baldwin, P.T.H. Fisk, H.-A. Bachor and G.I. Opat 73 (1989) 331
Interference of Raman and parametric processes in small angle scattering, M.V. Chekhova, T.V. Laptinskaya and A.N. Penin 73 (1989) 361
Variation of the switching power with diffusion length in a nonlinear directional coupler, E.M. Wright, D.R. Heatley, G.I. Stegeman and K.J. Blow 73 (1989) 385
Study of the length dependence of frequency-doubled light in optical fibers, B. Batdorf, C. Krautschik, U. Österberg, G. Stegeman, J.W. Leitch, J.R. Rotgé and T.F. Morse 73 (1989) 393
Simultaneous phase matching of three second-order nonlinear optical processes in $LiNbO_3$, H.J. Bakker, P.C.M. Planken, L. Kuipers and A. Lagendijk 73 (1989) 398
Optical vortices, P. Coullet, L. Gil and F. Rocca 73 (1989) 403
Unusual modulation instability in fibers with normal and anomalous dispersions, A. Barthelemy and R. De La Fuente 73 (1989) 409
Phase shift and cross talk of a self-pumped phase-conjugate mirror, Y. Tomita, R. Yahalom and A. Yariv 73 (1989) 413

An efficient Raman shifter for the generation of tunable infrared radiation in the range 3.0–3.5 μm, G. Sciurba and H.J. Loesch 73 (1989) 489
Observations on the coupling channel of two mutually incoherent beams without internal reflection in $BaTiO_3$, D. Wang, Z. Zhang, Y. Zhu, S. Zhang and P. Ye 73 (1989) 495
Nonlinear dynamics of an elliptically polarised beam with elliptical irradiance distribution, V.P. Nayyar and A. Kumar 73 (1989) 501
Phase dynamics in a Doppler broadened optically-pumped laser, E. Roldán, G.J. de Valcárcel, R. Vilaseca, F. Silva, J. Pujol, R. Corbalán and F. Laguarta 73 (1989) 506